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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,924	03/05/2002	Tadayuki Inaba	113197-026	7075

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EXAMINER

PALMER, PHAN T H

ART UNIT PAPER NUMBER

2874

DATE MAILED: 06/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/091,924

Applicant(s)

INABA ET AL.

Examiner

PHAN T.H. PALMER

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2, 4 and 5 is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3-4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Applicant's cooperation is requested in correcting any error of which applicant may become aware in the specification.

***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

3. The information disclosure statement submitted on 03/05/2002, 07/08/2002, and 03/17/2003, have been considered by the examiner and made of record. See attached form PTO-1449.

***Drawings***

4. Figures 5, 6, and 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim 3 is dependent on claims 1 and 2, therefore, the claim 3 is indefinite and vague.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 1 is rejected under 35 U.S.C. 102(a) as being anticipated by Kikuchi et al.

The Kikuchi et al reference discloses in article "Splicing of Polarization Maintaining Optical Fibers":

**A polarization maintaining optical fiber comprising:**

- a core;
- a cladding disposed around the core; and

- two stress applying portions disposed in the cladding to be approximately symmetrical with respect to the core, wherein an angle formed by a line connecting the center of one of the stress applying portions with the center of the core and a line connecting the center of the other stress applying portion with the center of the core is 0.4 degrees and 0.8 degrees (col. 2, page 68, lines 28-31; figure 1).

With regard to claim 1, the Kikuchi et al discloses all the claimed invention.

***Allowable Subject Matter***

7. Claims 2, 4 and 5 are allowable over prior art, because none of the references in alone or in combination discloses.

**+++ A polarization maintaining optical fiber preform comprising:**

- a core element;
- a cladding element disposed around the core element; and
- two stress applying elements disposed in the cladding element to be approximately symmetrical with respect to the core element,

which is produced by forming an optical fiber preform including the core element and the cladding element, forming one insertion hole in the cladding element so as to pierce through the cladding element in parallel to the core element, and then rotating the optical fiber preform further including the insertion hole 180 degrees around the core element, followed by forming the other insertion hole in the cladding element so as

to pierce through the cladding element in parallel to the core element, and  
then inserting the stress applying elements into the insertion holes, as  
claims in claim 2.

**+++ A method of producing a polarization maintaining optical fiber preform including** a core element, a cladding element disposed around the core element, and two stress applying elements disposed in the cladding element to be approximately symmetrical with respect to the core element, comprising:

- a step of forming an optical fiber preform including the core element and the cladding element;
- a step of forming one insertion hole in the cladding element so as to pierce through the cladding element in parallel to the core element;
- a step of rotating the optical fiber perform further including the insertion hole 180 degrees around the core element;
- a step of forming the other insertion hole in the cladding element so as to pierce through the cladding element in parallel to the core element;  
and
- a step of inserting the stress applying elements into the insertion holes,  
as discloses in claim 4.

The underline limitations are critically, since the it produces a polarization maintaining optical fiber, avoid large distortions are anisotropically generated in the core, which causes birefringence in the polarization maintaining optical fiber.

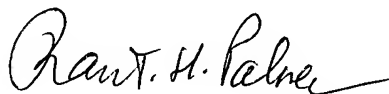
**CONTACT INFORMATION**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHAN T.H. PALMER whose telephone number is 703-308-4848. The examiner can normally be reached on 4/4 OFF MONDAY.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RODNEY B. BOVERNICK can be reached on 308-4819. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7382 for regular communications and N/A for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.

PTHP  
June 16, 2003



**PHAN T. H. PALMER  
PRIMARY EXAMINER**